

IN THE CLAIMS:

Please enter the current claim set as follows:

Claims 1-21: Cancelled.

22. (Original) A method of depositing deposition materials onto a substrate in a vacuum chamber, comprising:

in a first cycle, closing a non-sealing circular flow restrictor surrounding the substrate wherein the flow restrictor couples the interior of the chamber to an exhaust port of the chamber and admitting a first deposition gas into the chamber to react with a substrate in the chamber while the flow restrictor is closed wherein the closed flow restrictor limits the exhaustion of the first deposition gas through the exhaust flow restrictor to the exhaust port to facilitate depositing a first deposition material onto the substrate;

in a second cycle, opening the flow restrictor and purging the chamber of the first deposition gas while the flow restrictor is open;

in a third cycle, closing the flow restrictor and admitting a second deposition gas into the chamber to react with the substrate in the chamber while the flow restrictor is closed wherein the closed flow restrictor limits the exhaustion of the second deposition gas through the exhaust flow restrictor to the exhaust port to facilitate depositing a second deposition material onto the substrate;

in a fourth cycle, opening the flow restrictor and purging the chamber of the second deposition gas while the flow restrictor is open; and

repeating the above cycles thereby repeatedly and alternately closing and opening the flow restrictor and alternately depositing the first and second materials while the flow restrictor is closed, and alternately purging the first and second deposition gasses while the flow restrictor is open.

23. (Original) The method of claim 22 wherein said deposition materials form a plurality of layers on the substrate, said layers including one or more materials selected from the group of tantalum, tantalum nitride, tantalum oxide, titanium, titanium nitride, tungsten, tungsten silicide, silicon nitride, and aluminum oxide.
24. (Original) The method of claim 22 wherein an atomic layer is deposited in each of said first and third cycles.
25. (Original) The method of claim 22 wherein each cycle is less than 10 seconds in duration.
26. (Original) The method of claim 25 wherein each cycle is less than .5 seconds in duration.
27. (Original) The method of claim 25 wherein closing the flow restrictor includes seating a circular annular valve body surrounding the substrate against a circular annular valve seat surrounding the substrate and positioned on a lid of the chamber.

Claims 28-51: Cancelled.